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IN BLACK INK
(For instructions, see booklet: "How to File an Application to Appropriate Water in California")

APPLICATION NO. 31724
(leave blank)

California Environmental Protection Agency

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000, Sacramento, CA 95812-2000
Tel: (916) 341-5300 Fax: (916) 341-5400
www.waterrights.ca.gov

APPLICATION TO APPROPRIATE WATER

SECTION A: NOTICE INFORMATION

1. APPLICANT/AGENT

a.

	APPLICANT	ASSIGNED AGENT (if any)
Name	A. Rafanelli Winery & Vineyards	Nicholas F. Bonsignore, P.E..
	4685 West Dry Creek Road	Wagner & Bonsignore, CCE
Mailing Address	Healdsburg, CA 95448-9115	444 North Third Street, Ste 325
City, State & Zip		Sacramento, CA 95811
Telephone		
Fax		
E-mail		

2. OWNERSHIP INFORMATION (Please check type of ownership.)

☐ Sole Owner
☒ Limited Partnership*
☐ Corporation
☐ Limited Liability Company (LLC)
☐ Business Trust
☐ Joint Venture
☐ General Partnership*
☐ Husband/Wife Co-Ownership
☐ Other _____

*Please provide a copy of your partnership agreement.
Schedule A of partnership agreement is provided as Attachment 7 hereto.

3. PROJECT DESCRIPTION (Provide a detailed description of your project, including, but not limited to, type of construction activity, area to be graded or excavated, and how the water will be used.)

Project is complete and no new construction is required. Water is collected in an existing on-stream reservoir that was constructed in 1963 based on a design prepared by the U.S. Department of Agriculture. Water is used for irrigation and frost protection of existing vineyard and orchard.

☐ *For continuation, see Attachment No.* ___

4. PURPOSE OF USE, DIVERSION/STORAGE AMOUNT AND SEASON

a. PURPOSE OF USE (irrigation, domestic, etc.)	DIRECT DIVERSION				STORAGE		
	AMOUNT		SEASON OF DIVERSION		AMOUNT	SEASON OF COLLECTION	
	Rate (cfs or gpd)*	Acre-feet per year	Beginning date (month & day)	Ending date (month & day)	Acre-feet per year	Beginning date (month & day)	Ending date (month & day)
Irrigation					30	10/1	5/31
Frost Protection							

☐ *See Attachment No.* ___

* If rate is less than 0.025 cubic feet per second (cfs), use gallons per day (gpd).

b. Total combined amount taken by direct diversion and storage during any one year will be 30 acre-feet.
c. Reservoir storage is: ☒ onstream ☐ offstream ☐ underground (If underground storage, attach Form APP-UGSTOR.)
d. County in which diversion is located: Sonoma County in which water will be used: Sonoma
e. Assessor's Parcel Number(s): 090-120-028, 090-120-038

5. SOURCES AND POINTS OF DIVERSION/REDIVERSION

a. Sources and Points of Diversion (POD)/Points of Rediversion (PORD):

☒ POD / ☐ PORD # 1: Unnamed stream tributary to Dry Creek
thence Russian River
☐ POD / ☐ PORD #___: _____ tributary to _____
thence _____
☐ POD / ☐ PORD #___: _____ tributary to _____
thence _____
☐ POD / ☐ PORD #___: _____ tributary to _____
thence _____

☒ *See Attachment No.* 1

b. State Planar and Public Land Survey Coordinate Description:

POD/ PORD #	CALIFORNIA COORDINATES (NAD 27)	ZONE	POINT IS WITHIN (40-acre subdivision)	SECTION	TOWN -SHIP	RANGE	BASE AND MERIDIAN
1	N. 1,733,047 E. 360,276	2	SW ¼ of SE ¼	2	9N	10W	MD
	NAD 83 N: 2,000,681 E: 6,294,425		¼ of ¼				
			¼ of ¼				
			¼ of ¼				

DT 9-18-08

☐ *See Attachment No.* ___

c. Name of the post office most often used by those living near the proposed point(s) of diversion:
Healdsburg, CA

6. WATER AVAILABILITY

a. Have you attached a water availability analysis for this project? ☒ YES ☐ NO
If NO, provide sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation:

☒ *See Attachment No.* 2

b. Is your project located on a stream system declared to be fully appropriated by the State Water Resources Control Board during your proposed season of diversion? ☐ YES ☒ NO

c. In an average year, does the stream dry up at any point downstream of your project? ☒ YES ☐ NO If YES, during which months? ☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☒ Jun ☒ Jul ☒ Aug ☒ Sep ☐ Oct ☐ Nov ☐ Dec

d. What alternate sources of water are available if a portion of your requested diversion season must be excluded because water is not available for appropriation? (e.g., percolating groundwater, purchased water, etc.)
groundwater

☐ *See Attachment No.* ___

7. PLACE OF USE

USE IS WITHIN (40-acre subdivision)	SECTION*	TOWNSHIP	RANGE	BASE & MERIDIAN	IF IRRIGATED	
					Acres	Presently cultivated?
NW ¼ of SE ¼	2 (P)	9N	10W	MD	14.6	☒ YES ☐ NO
NE ¼ of SE ¼	2 (P)	9N	10W	MD	3.4	☒ YES ☐ NO
SW ¼ of SE ¼	2 (P)	9N	10W	MD	15.8	☒ YES ☐ NO
SE ¼ of SE ¼	2 (P)	9N	10W	MD	0.5	☒ YES ☐ NO
SE ¼ of SW ¼	2 (P)	9N	10W	MD	0.3	☒ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
¼ of ¼						☐ YES ☐ NO
				Total:	34.6	

*Please indicate if section is projected with a "(P)" following the section number.
☐ *See Attachment No.* ___

8. PROJECT SCHEDULE

a. Project is:
☐ proposed. Year construction will begin: _____
☐ partially complete. Extent of completion: _____
☒ complete. Year completed: 1963

b. Year of first use: 1964 Year water will be used to the full extent intended: 2019

SECTION B: MISCELLANEOUS DIVERSION INFORMATION

1. JUSTIFICATION OF AMOUNTS REQUESTED

a. ☒ IRRIGATION: Maximum area to be irrigated in any one year: 34.6 acres.

CROP	ACRES	METHOD OF IRRIGATION (sprinklers, flooding, etc.)	WATER USE (Acre-feet/Yr.)	SEASON OF WATER USE	
				Beginning date (month & day)	Ending date (month & day)
Vineyard	33.6	Drip	0.6	June 1	Oct. 31
Olives	1	Drip	1.1	June 1	Oct. 31

☐ *See Attachment No.* ___

b. ☐ DOMESTIC: Number of residences to be served: _____ Separately owned? ☐ YES ☐ NO
Number of people to be served: _____ Estimated daily use per person is: _____ gallons per day
Area of domestic lawns and gardens: _____ square feet
Incidental domestic uses: _____
(dust control area, number and kind of domestic animals, etc.)

c. ☐ STOCKWATERING: Kind of stock: _____ Maximum number: _____
Describe type of operation: _____
(feedlot, dairy, range, etc.)

d. ☐ RECREATIONAL: Type of recreation: ☐ Fishing ☐ Swimming ☐ Boating ☐ Other _____

e. ☐ MUNICIPAL:

POPULATION List for 5-year periods until use is completed		MAXIMUM MONTH		ANNUAL USE		
Period	Population	Average daily use (gallons per capita)	Rate of diversion (cfs)	Average daily use (gallons per capita)	Acre-foot (per capita)	Total (acre-feet)
Present						

☐ *See Attachment No.* ___

Month of maximum use during year: _____ Month of minimum use during year: _____

f. ☐ HEAT CONTROL: Area to be heat controlled: _____ net acres
Type of crops protected: _____
Rate at which water is applied to use: _____ gpm per acre
Heat protection season will begin _____ (month & day) and end _____ (month & day).

g. ☒ FROST PROTECTION: Area to be frost protected: 21 net acres
Type of crops protected: Vineyard
Rate at which water is applied to use: 55 gpm per acre
The frost protection season will begin 3/15 (month & day) and end 5/15 (month & day).

h. ☐ INDUSTRIAL: Type of industry: _____
Basis for determination of amount of water needed: _____

i. ☐ MINING: Name of the claim: _____ ☐ Patented ☐ Unpatented
Nature of the mine: _____ Mineral(s) to be mined: _____
Type of milling or processing: _____
After use, the water will be discharged into _____ (watercourse)
in _____ ¼ of _____ ¼ of Section _____, T _____, R _____, _____ B. & M.

j. ☐ POWER: Total head to be utilized: _____ feet
Maximum flow through the penstock: _____ cfs
Maximum theoretical horsepower capable of being generated by the works (cfs x fall ÷ 8.8): _____
Electrical capacity (hp x 0.746 x efficiency): _____ kilowatts at: _____% efficiency
After use, the water will be discharged into _____ (watercourse)
in _____ ¼ of _____ ¼ of Section _____, T _____, R _____, _____ B. & M. FERC No.: _____

k. ☐ FISH AND WILDLIFE PRESERVATION AND/OR ENHANCEMENT: List specific species and habitat type that will be preserved or enhanced in Item 7a of Section C.

l. ☐ OTHER: Describe use: _____
Basis for determination of amount of water needed: _____

2. DIVERSION AND DISTRIBUTION METHOD

a. Diversion will be by gravity by means of: dam
(dam, pipe in unobstructed channel, pipe through dam, siphon, weir, gate, etc.)

b. Diversion will be by pumping from: _____
(sump, offset well, channel, reservoir, etc)

Pump discharge rate: _____ ☐ cfs or ☐ gpd Horsepower: _____ Pump Efficiency: _____

c. Conduit from diversion point to first lateral or to offstream storage reservoir:

CONDUIT (pipe or channel)	MATERIAL (type of pipe or channel lining; indicate if pipe is buried or not)	CROSS-SECTION (pipe diameter, or ditch depth and top and bottom width) (inches or feet)	LENGTH (feet)	TOTAL LIFT OR FALL		CAPACITY (cfs, gpd or gpm)
				feet	+ or -	

☐ *See Attachment No.* ___

d. Storage reservoirs: (For underground storage, complete and attach form APP-UGSTOR)

RESERVOIR NAME OR NUMBER	DAM				RESERVOIR		
	Vertical height from downstream toe of slope to spillway level (feet	Construction material	Length (feet)	Freeboard: dam height above spillway crest (feet)	Surface area when full (acres)	Capacity (acre-feet)	Maximum water depth (feet)
1	21	earth	200	3	1.7	30	24

☐ *See Attachment No.* ___

e. Outlet pipe: Complete for storage reservoirs having a capacity of 10 acre-feet or more.

RESERVOIR NAME OR NUMBER	OUTLET PIPE				
	Diameter (inches)	Length (feet)	Fall: vertical distance between entrance and exit of outlet pipe (feet)	Head: vertical distance from spillway to entrance of outlet pipe (feet)	Dead Storage: storage below entrance of outlet pipe (acre-feet)
1	6	140	unknown	19	1 (est.)

☐ *See Attachment No.* ___

f. If water will be stored and the reservoir is not at the point of diversion, the maximum rate of diversion to offstream storage will be _____ cfs. Diversion to offstream storage will be made by: ☐ Pumping ☐ Gravity

3. CONSERVATION AND MONITORING

a. What methods will you use to conserve water? Explain. Drip system for irrigation.

b. How will you monitor your diversion to be sure you are within the limits of your water right and you are not wasting water? ☐ Weir ☐ Meter ☐ Periodic sampling ☒ Other (describe) Reservoir level will be observed periodically. Vineyard management and irrigation practices preclude wasting of water.

4. RIGHT OF ACCESS

a. Does the applicant own all the land where the water will be diverted, transported and used? ☒ YES ☐ NO
If NO, I ☐ do ☐ do not have a recorded easement or written authorization allowing me access.

b. List the names and mailing addresses of all affected landowners and state what steps are being taken to obtain access: _____

☐ *See Attachment No.* ___

5. EXISTING WATER RIGHTS AND RELATED FILINGS

a. Do you claim an existing right for the use of all or part of the water sought by this application? ☐ YES ☒ NO
If YES, please specify: ☐ Riparian ☐ Pre-1914 ☐ Registration ☐ Permit ☐ License
☐ Percolating groundwater ☐ Adjudicated ☐ Other (specify) _____

b. For each existing right claimed, state the source, year of first use, purpose, season and location of the point of diversion (to within quarter-quarter section). Include number of registration, permit, license, or statement of

water diversion and use, if applicable. _____

c. List any related applications, registrations, permits, or licenses located in the proposed place of use or that utilize the same point(s) of diversion? _____

☐ *See Attachment No.* ___

6. OTHER SOURCES OF WATER

Are you presently using, or do you intend to use, purchased water or water supplied by contract in connection with this project? ☐ Yes ☒ No If yes, please explain: _____

7. MAP REQUIREMENTS

The Division cannot process your application without accurate information showing the source of water and location of water use. You must include a map with this application form that clearly indicates the township, range, section and quarter/quarter section of (1) the proposed points of diversion and (2) the place of use. A copy of a U.S.G.S. quadrangle/topographic map of your project area is preferred, and can be obtained from sporting goods stores or through the Internet at http://topomaps.usgs.gov. A certified engineering map is required when (1) appropriating more than three cfs by direct diversion, (2) constructing a dam which will be under the jurisdiction of the Division of Safety of Dams, (3) creating a reservoir with a surface area in excess of ten acres or (4) appropriating more than 1000 acre-feet per annum by underground storage. See the instruction booklet for more information.

☒ *See Attachment No.* 3

SECTION C: ENVIRONMENTAL INFORMATION

Note: Before a water right permit may be issued for your project, the State Water Resources Control Board (SWRCB) must consider the information contained in an environmental document prepared in compliance with the California Environmental Quality Act (CEQA). This form is not a CEQA document. If a CEQA document has not yet been prepared for your project, a determination must be made of who is responsible for its preparation. If the SWRCB is determined to be responsible for preparing the CEQA document, the applicant will be required to pay all costs associated with the environmental evaluation and preparation of the required documents. Please answer the following questions to the best of your ability and submit with this application any studies that have been conducted regarding the environmental evaluation of your project.

1. COUNTY PERMITS

a. Contact your county planning or public works department and provide the following information:

Person contacted: See Attachment 4 Date of contact: 8-29-2008

Department: See Attachment 4 Telephone: (707) 565-1900

County Zoning Designation: Land Intensive Agriculture (LIA)

Are any county permits required for your project? ☐ YES ☒ NO If YES, check appropriate box below:

☐ Grading permit ☐ Use permit ☐ Watercourse ☐ Obstruction permit ☐ Change of zoning

☐ General plan change ☐ Other (explain): _____

b. Have you obtained any of the required permits described above? ☐ YES ☐ NO

If YES, provide a complete copy of each permit obtained.

☒ *See Attachment No.* 4

2. STATE/FEDERAL PERMITS AND REQUIREMENTS

a. Check any additional state or federal permits required for your project:

☐ Federal Energy Regulatory Commission ☐ U.S. Forest Service ☐ U.S. Bureau of Land Management

☐ U.S. Corps of Engineers ☐ U.S. Natural Res. Conservation Service ☐ Calif. Dept. of Fish and Game

☐ State Lands Commission ☐ Calif. Dept. of Water Resources (Div. of Safety of Dams)

☐ Calif. Coastal Commission ☐ State Reclamation Board ☐ Other (specify) _____

b. For each agency from which a permit is required, provide the following information:

AGENCY	PERMIT TYPE	PERSON(S) CONTACTED	CONTACT DATE	TELEPHONE NO.

☒ *See Attachment No.* 5

c. Does your proposed project involve any construction or grading-related activity that has significantly altered or would significantly alter the bed, bank, or riparian habitat of any stream or lake? ☒ YES ☐ NO
If YES, explain: The existing dam and reservoir was designed by the U.S. Department of Agriculture, and its construction in 1963 likely altered the bed and bank of the subject stream.

☐ *See Attachment No.* ___

d. Have you contacted the California Department of Fish and Game concerning your project? ☐ YES ☒ NO
If YES, name and telephone number of contact: _____

3. ENVIRONMENTAL DOCUMENTS

a. Has any California public agency prepared an environmental document for your project? ☐ YES ☒ NO

c. If YES, submit a copy of the latest environmental document(s) prepared, including a copy of the notice of determination adopted by the California public agency. Public agency: _____

d. If NO, check the appropriate box and explain below, if necessary:
- ☐ The applicant is a California public agency and will be preparing the environmental document.*
- ☒ I expect that the SWRCB will be preparing the environmental document.**
- ☐ I expect that a California public agency other than the State Water Resources Control Board will be preparing the environmental document.* Public agency: _____

☐ *See Attachment No.* ___

* Note: When completed, submit a copy of the final environmental document (including notice of determination) or notice of exemption to the SWRCB, Division of Water Rights. Processing of your application cannot proceed until these documents are submitted.

** Note: CEQA requires that the SWRCB, as Lead Agency, prepare the environmental document. The information contained in the environmental document must be developed by the applicant and at the applicant's expense under the direction of the SWRCB, Division of Water Rights.

4. WASTE/WASTEWATER

a. Will your project, during construction or operation, (1) generate waste or wastewater containing such things as sewage, industrial chemicals, metals, or agricultural chemicals, or (2) cause erosion, turbidity or sedimentation?
☐ YES ☒ NO
If YES, or you are unsure of your answer, explain below and contact your local Regional Water Quality Control Board for the following information (See instruction booklet for address and telephone no.):

☐ *See Attachment No.* ___

b. Will a waste discharge permit be required for your project? ☐ YES ☒ NO
Person contacted: _____ Date of contact: _____

c. What method of treatment and disposal will be used? _____

☐ *See Attachment No.* ___

5. ARCHEOLOGY

a. Have any archeological reports been prepared on this project? ☐ YES ☒ NO

b. Will you be preparing an archeological report to satisfy another public agency? ☐ YES ☒ NO

c. Do you know of any archeological or historic sites located within the general project area? ☐ YES ☒ NO
If YES, explain: _____

☐ *See Attachment No.* ___

6. ENVIRONMENTAL SETTING

Attach **three complete sets of color photographs**, clearly dated and labeled, showing the vegetation that exists at the following three locations:
- ☒ Along the stream channel immediately downstream from the proposed point(s) of diversion.
- ☒ Along the stream channel immediately upstream from the proposed point(s) of diversion.
- ☒ At the place(s) where the water is to be used.
- ☐ *See Attachment No.* 6

SECTION D: SUBMITTAL FEES

Calculate your application filing fee using the "Water Right Fee Schedule Summary" that was enclosed in the application packet. The "Water Right Fee Schedule Summary" can also be viewed at the Division of Water Rights' website (www.waterrights.ca.gov).

A check for the application filing fee, payable to the "Division of Water Rights" and an $850 check for the environmental review fee, payable to the "California Department of Fish and Game," must accompany this application. All applicable fees are required at the time of filing. Your application will be returned to you if it is not accompanied by all required fees.

SECTION E: DECLARATION AND SIGNATURE

I declare under penalty of perjury that all information provided is true and correct to the best of my knowledge and belief. I authorize my agent, if I have designated one above, to act on my behalf regarding this water right application.

Signature of Applicant	Title or Relationship	Date
	owner	9/7/08
Signature of Co-Applicant (if any)	Title or Relationship	Date

"APPLICATION TO APPROPRIATE WATER" CHECKLIST

Before you submit your application, be sure to:

- ❑ **Answer each question completely in Sections A, B, and C.**
- ❑ **Number and include all necessary attachments.**
- ❑ **Include a legible map that meets the requirements discussed in the instruction booklet (Item B6).**
- ❑ **Include the Water Availability Analysis or sufficient information to demonstrate that there is reasonable likelihood that unappropriated water is available for the proposed appropriation (Item A6).**
- ❑ **Include three complete sets of color photographs of the project site (Item C6).**
- ❑ **Enclose a check for the required fee, payable to the Division of Water Rights, as specified in Section D.**
- ❑ **Enclose a $850 check for the environmental review fee, payable to the Department of Fish and Game, as specified in Section D.**
- ❑ **Sign and date the application in Section E.**

Send the original and one copy of the entire application to:

State Water Resources Control Board
Division of Water Rights
P.O. Box 2000
Sacramento, CA 95812-2000

Schedule A
Schedule of Partners
A. RAFANELLI WINERY AND VINEYARDS LP

Partner	Classification	Units	% of Ownership
RAFANELLI MANAGEMENT, LLC	General	200 units	2%
RLF MANAGEMENT, LLC	General	50 units	0.5%
DAVID RAFANELLI	Limited	4825 units	48.25%
PATRICIA RAFANELLI	Limited	4825 units	48.25%
RASHELL L. RAFANELLI	Limited	100 units	1%

Note: The initial capital contribution of each partner shall be his, her or its proportional interest in vineyards, winery equipment and cash. All such contributions shall be proportional to the interests set forth above. In the event there is any deviation from such proportionality, the subscribed units, shares, or percentages of partnership indicated by this schedule may be adjusted, upon the conclusion of funding by original capital contributions, according to the fair market value of each partner's capital contribution credited to his, her, or its capital account divided by the fair market value of all property contributed by original contribution to the Partnership.

ATTACHMENT 1
to Water Right Application
by A. Rafanelli Winery & Vineyards

Re: Section A , Item 5a. SOURCES AND POINTS OF DIVERSION/REDIVERSION

The sequence of tributary streams downstream of the POD is provided for location information only. Prior to project development, flow in the subject stream historically dissipated into the ground across West Dry Creek Road, and did not accrue to Dry Creek as channelized flow. Based on the USGS 7.5-minute quad map and pre-project aerial photos there is no obvious indication that the subject stream continued beyond West Dry Creek Road historically. Improvements to downstream drainage in the mid to late 20th century, specifically construction of a buried pipeline at the base of the reservoir spillway, a ditch along West Dry Creek Road, and a buried pipeline along Lambert Bridge Road, now facilitate the conveyance of excess streamflows (reservoir spills) to Dry Creek.

ATTACHMENT 4
to Water Right Application
by A. Rafanelli Winery & Vineyards

Re: Section C, Item 1. COUNTY PERMITS

a. Persons contacted in Sonoma County Permit and Resource Management Department:
Dave Schiltgen, Planning Division
John Rainwater, Engineering Division

Construction of dam and reservoir predates enactment of County permitting requirements.

ATTACHMENT 5
to Water Right Application
by A. Rafanelli Winery & Vineyards

Re: Section C, Item 2.a. STATE/FEDERAL PERMITS AND REQUIREMENTS

The project has existed for decades, and no new construction is required or planned. The Applicant is not aware of any other required State or federal permits and approvals.

ATTACHMENT 2
to Water Right Application
by A. Rafanelli Winery & Vineyards

Re: Section A, Item 6. WATER AVAILABILITY

California Water Code Section 1260(k) requires that every application for a permit to appropriate water shall include "sufficient information to demonstrate a reasonable likelihood that unappropriated water is available for the proposed appropriation." This narrative and accompanying calculations provide the required information.

The subject Application is within the watershed of an unnamed stream tributary to Dry Creek thence the Russian River in Sonoma County (see attached map). The Application proposes a diversion season of October 1 to May 31. The following describes the methodology used to demonstrate a *reasonable* likelihood that water is physically available for the proposed appropriation.

The attached map shows the location and tributary watershed of the point of diversion. POD 1 is an existing onstream reservoir with an estimated capacity of 30 acre-feet. Water collected in the POD 1 reservoir will be used for irrigation and frost protection. The map also shows lines of equal mean annual runoff based on the map included with the document entitled *Mean Annual Runoff in the San Francisco Bay Region, California, 1931-70 by S.E. Rantz, 1974.*[1] An excerpt of this map is attached (Rantz map).

The weighted mean annual runoff for the subject watershed was computed based on the Rantz map. Mean *seasonal* runoff for the subject watershed was estimated by adjusting the mean *annual* runoff assuming that the ratio of seasonal-to-annual runoff is identical to the ratio of seasonal-to-annual mean precipitation. The pattern of precipitation was based on the long-term record for the Healdsburg precipitation station (record attached).

Calculations for the foregoing methodology are attached. Two other water rights of record within the watershed of the subject reservoir were considered in the analysis. The calculations show that in a normal year the estimated seasonal runoff at POD 1, after accounting for upstream rights, is about 96 acre-feet, which is over 3 times the amount requested by the Application.

Based on the foregoing it is reasonable to conclude that water is available for the subject Application.

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[1] USGS Miscellaneous Field Studies Map MF-613, prepared in cooperation with the California Department of Water Resources.

Water Right Application by David Rafanelli

Estimate of Water Availability

Point of Diversion #1

Monthly Precipitation[1]

HEALDSBURG, CALIFORNIA

Month	Mean Precipitation (in)
October	2.25
November	5.24
December	8.21
January	8.92
February	7.42
March	5.42
April	2.66
May	1.08
June	0.30
July	0.04
August	0.13
September	0.37
Annual	**42.03**

Mean Precipitation for requested diversion season (10/1 - 5/31):	41.19 in
Precipitation during requested diversion season as a percentage of total precipitation:	98.00%
Mean Annual Runoff:[2]	20.0 in
Estimated Mean Seasonal Runoff:[3]	19.6 in
Watershed Area for Point of Diversion #1:	60.5 ac

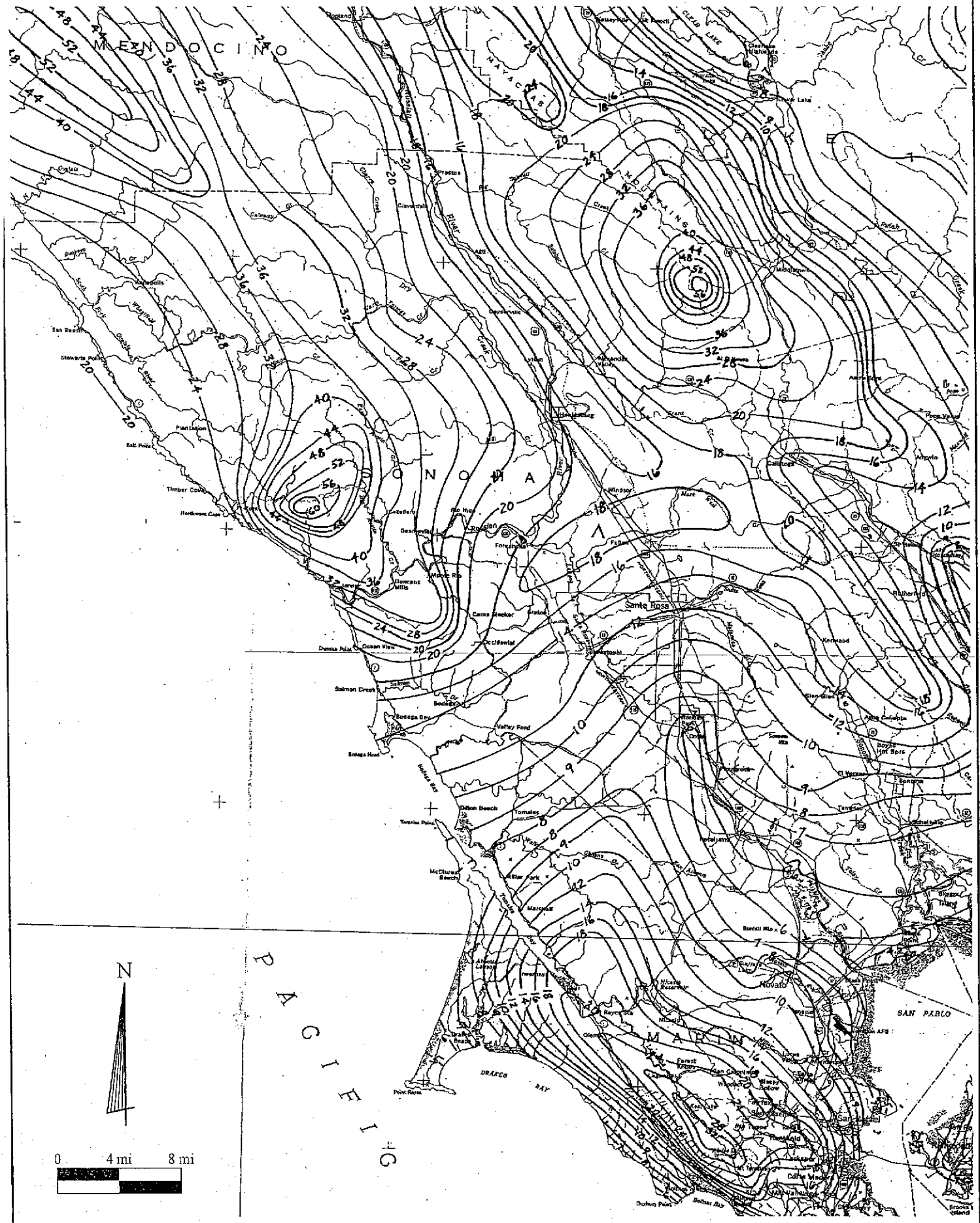
Total Estimated Mean Seasonal Runoff at Point of Diversion #1:	98.8 ac-ft
Senior Diverters of Record within subject watershed (face value):	
License 9507 (Appl. 22090) - Douglas A. Rafanelli (10/31 - 5/1):	3.0 ac-ft
License 9508 (Appl. 22141) - Douglas A. Rafanelli (10/31 - 5/1):	0.2 ac-ft
Subtotal water available:	95.6 ac-ft
Requested diversion amount:	30.0 ac-ft
Total seasonal amount remaining in stream after diversion:	65.6 ac-ft

Notes:

[1] Source: California Climate Data Archive website (http://www.calclim.dri.edu/ccda/data.html) accessed September 3, 2008.

[2] *Mean Annual Runoff in the San Francisco Bay Region, California, 1931-70 (Miscellaneous Field Studies Map MF-613)*, by S.E. Rantz, 1974.

[3] Estimated mean seasonal runoff is computed by multiplying mean annual runoff by percent seasonal precipitation.



Mean Annual Runoff In The San Francisco Bay Region, California, 1931-70 by S.E. Rantz, 1974.

September 2008

HEALDSBURG, CALIFORNIA

Monthly Total Precipitation (inches)

-43875

File last updated on Aug 20, 2008

*** Note *** Provisional Data *** After Year/Month 200804

a = 1 day missing, b = 2 days missing, c = 3 days, ..etc..,

z = 26 or more days missing, A = Accumulations present

Long-term means based on columns; thus, the monthly row may not sum (or average) to the long-term annual value.

MAXIMUM ALLOWABLE NUMBER OF MISSING DAYS : 5

Individual Months not used for annual or monthly statistics if more than 5 days are missing.

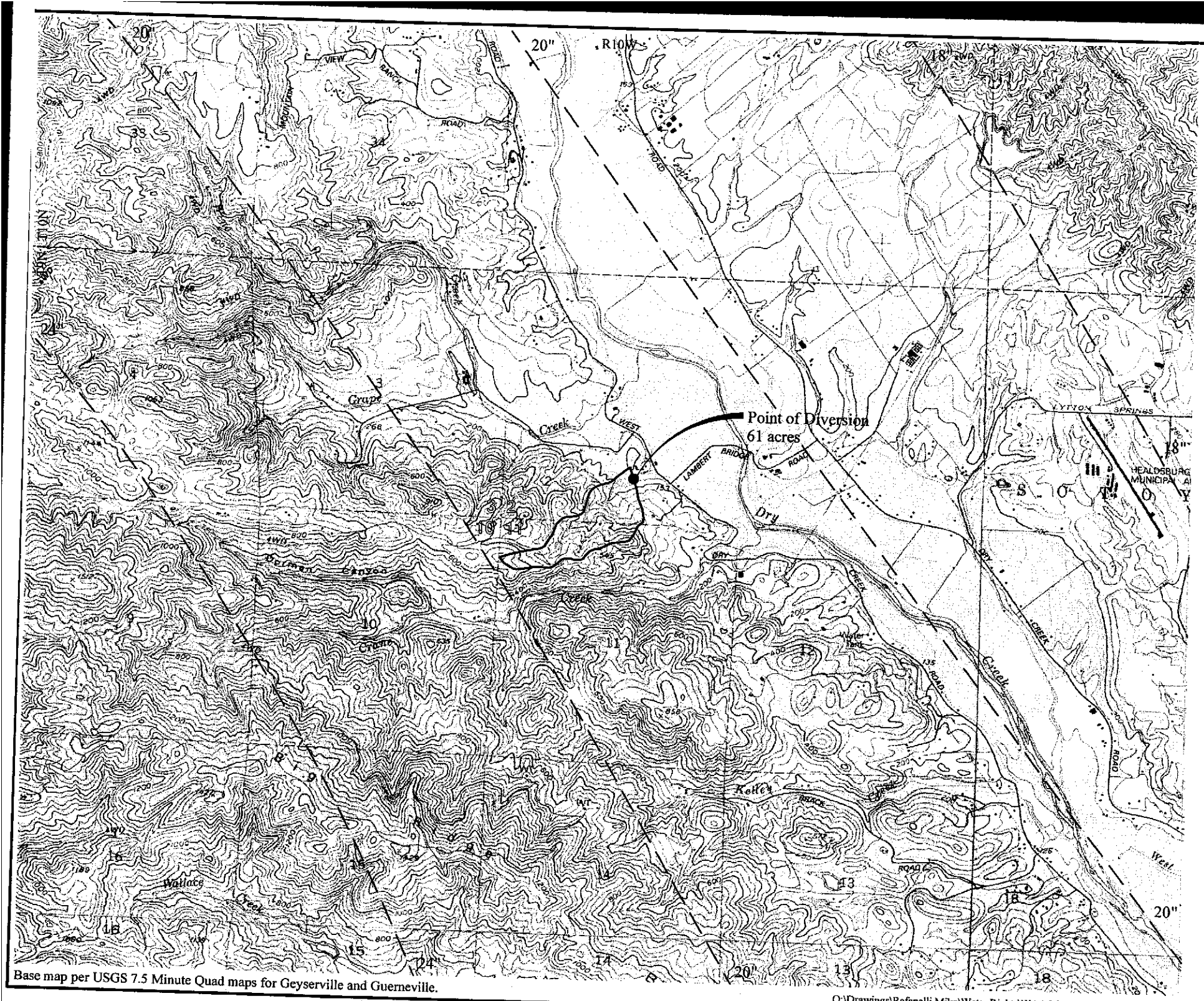
Individual Years not used for annual statistics if any month in that year has more than 5 days missing.

WY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANN
1931				10.31	1.96	2.92	0.45	1.40	1.76	0.00	0.00	0.00	-
1932	1.89	3.19	15.61	3.07	1.91	1.14	1.71	1.83	0.03	0.00	0.00	0.00	30.38
1933	0.05	2.60	4.81	9.37	1.39	5.65	0.16	2.43	0.00	0.00	0.00	0.21	26.67
1934	2.07	0.00	14.67	1.42	8.14	1.20	0.92	1.57	1.12	0.00	0.00	0.08	31.19
1935	4.07	7.17	3.71	12.07	4.80	8.23	5.28	0.03	0.00	0.00	0.03	0.17	45.56
1936	1.44	1.83	5.19	8.59	13.54	1.76	2.58	1.05	1.34	0.12	0.00	0.00	37.44
1937	0.27	0.03	4.48	5.19	11.86	8.45	1.73	0.15	1.77	0.00	0.00	0.00	33.93
1938	1.34	9.74	9.49	8.14	13.47	10.67	2.79	0.03	0.00	0.01	0.00	0.41	56.09
1939	2.74	2.55	1.85	5.20	1.87	3.00	0.22	1.79	0.00	0.00	0.00	0.05	19.27
1940	0.23	0.72	7.07	17.12	20.68	7.07	1.88	1.84	0.00	0.02	0.00	0.42	57.05
1941	2.85	3.15	21.35	15.15	12.70	6.89	7.60	1.82	0.60	0.00	0.04	0.04	72.19
1942	2.54	5.14	12.38	10.42	10.11	4.01	7.05	3.12	0.00	0.00	0.00	0.10	54.87
1943	1.20	5.49	7.52	13.29	3.54	3.75	3.67	0.00	0.01	0.00	0.00	0.00	38.47
1944	1.43	1.68	3.43	7.56	8.90	2.87	2.90	2.83	0.21	0.00	0.00	0.02	31.83
1945	3.19	7.48	4.97	3.82	6.05	7.02	0.53	1.53	0.00	0.00	0.00	0.00 a	34.59
1946	6.71	6.70	14.84	2.49	4.06	1.89	0.10 a	0.50	0.00	0.18	0.00	0.07	37.54
1947	0.14	5.23	3.29	0.96	5.54	7.94	0.12	0.68	1.92	0.00	0.00	0.00	25.82
1948	6.54	1.06	2.11	3.75	1.55	6.43	12.93	1.23	0.42	0.00	0.00	0.09	36.11
1949	1.03	1.69	4.93	1.81	4.61	13.38	0.04	0.37	0.00	0.18	0.00	0.00	28.04
1950	0.07	2.48	2.87	10.49	8.49	2.98	1.75	0.69	0.28	0.00	0.00	0.00	30.10
1951	6.04	8.13	10.73	6.20	3.86	1.23	1.33	2.55	0.00	0.00	0.00	0.01	40.08
1952	2.76	8.82	13.69	13.41	3.92	6.17	1.69	0.39	1.97	0.00	0.00	0.00	52.82
1953	0.07	3.70	19.93	10.97	0.10	4.23	4.77	1.25	0.66	0.00	0.45	0.00	46.13
1954	1.54	6.85	1.00	12.28	5.13	6.88	4.61	0.05	0.42	0.07	3.17	0.00	42.00
1955	1.45	8.44	7.61	3.84	1.33	0.62	5.76	0.00	0.01	0.00	0.00	0.33	29.39
1956	0.47	4.58	21.91 e	16.62	9.05	0.31	2.90	0.84	0.05	0.00	0.00	0.12	56.85
1957	2.86	0.31	0.57	6.96	8.55	3.00	3.32	4.36	0.40	0.00	0.00	4.09	34.42
1958	8.77	1.17	5.28	10.04	23.34	9.64	6.50	0.30	0.85	0.09	0.00	0.00	65.98
1959	0.09	0.27	2.12	15.66	9.15	1.44	0.42	0.13	0.00	0.00	0.00	4.52	33.80
1960	0.00	0.00	2.04	9.27	10.45	5.95	1.49	1.12	0.00	0.00	0.00	0.00	30.32
1961	1.21	6.72	7.64	7.64	4.17	5.79	1.64	0.41	0.08	0.00	0.21	0.56	36.07
1962	0.29	6.80	3.79	1.88	16.91	7.13	0.40	0.14	0.00	0.00	0.30	0.26	37.90
1963	10.83	2.06	6.40	10.75	3.99	7.74	6.85	1.14	0.00	0.00	0.00	0.01	49.77
1964	3.14	12.09	1.26	5.74	0.22	2.68	0.26	0.62	0.46	0.03	0.00	0.00	26.50
1965	3.50	9.14	15.07	10.46	1.94	1.58	5.75	0.00	0.00	0.04	0.49	0.00	47.97
1966	0.11	12.42	6.61	11.33	6.29	1.34	1.25	0.13	0.05	0.00	0.11	0.11	39.75
1967	0.00	13.20	10.12	16.37	0.41	8.60	6.49	0.17	2.17	0.00	0.00	0.02	57.55
1968	1.14	3.47	5.89	10.96	6.59	4.89	1.44	0.23	0.00	0.00	0.86	0.03	35.50
1969	2.79	4.07	13.47	20.38	15.50	2.02	3.13	0.03	0.00	0.00	0.00	0.01	61.40
1970	2.71	1.56	18.58	25.24	5.20	2.63	0.12	0.02	0.45	0.00	0.00	0.00	56.51
1971	3.08	11.46	12.23	4.95	0.16	6.00	1.68	0.28	0.00	0.00	0.01	0.29	40.14
1972	0.43	3.00	7.77	2.02	2.92	1.23	3.12	0.13	0.06	0.00	0.00	0.67	21.35

WY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANN
1973	4.17	9.89	5.32	18.39	9.54	3.83	0.15	0.03	0.00	0.00	0.00	0.75	52.07
1974	4.79	21.20	6.65	10.67	5.21	12.17	2.07	0.15	0.00	1.71	0.00	0.00	64.62
1975	1.77	1.96	7.50	2.72	13.86	11.33	1.73	0.00	0.01	0.21	0.04	0.00	41.13
1976	5.62	1.43	1.92	0.41	2.93	1.01	3.24	0.00	0.00	0.03	1.12	0.56	18.27
1977	0.42	2.78	1.17	2.53	2.74	2.38	0.35	1.77	0.00	0.00	0.00	2.78	16.92
1978	1.10	8.48	9.00	19.14	9.79	7.45	4.44	0.15	0.00	0.00	0.00	2.21	61.76
1979	0.00	1.49	0.49	10.99	11.71	3.25	2.39	0.92	0.00	0.00	0.00	0.11	31.35
1980	4.98	7.08	10.75	8.82	14.61	1.79	3.06	0.36	0.27	0.04	0.00	0.00	51.76
1981	0.57	0.62	11.23	10.78	3.92	4.62	0.36	0.62	0.00	0.07	0.00	0.46	33.25
1982	4.66	13.34	13.06	9.03	6.51	9.41	7.20	0.00	0.04	0.00	0.00	0.87	64.12
1983	5.05	9.47	8.58	15.70	14.84	20.34	6.31	0.86	0.00	0.00	1.52	0.59	83.26
1984	1.15	17.57	17.37	0.86	3.07	3.97	1.58	0.20	0.22	0.00	0.20	0.06	46.25
1985	2.37	15.44	2.43	1.35	3.40	7.31	0.28	0.00	0.00	0.05	0.00	1.37	34.00
1986	1.65	4.92	4.98	9.89	21.95	9.24	0.98	0.46	0.00	0.00	0.00	1.95	56.02
1987	0.64	0.15	2.95	6.25	6.47	8.53	0.20	0.10	0.00	0.00	0.00	0.00	25.29
1988	2.65	4.92	11.54	9.16	0.65	0.07	2.58	0.75	0.25	0.00	0.00	0.00	32.57
1989	0.41	5.92	4.53	1.50	1.21	12.01	1.75	0.19	0.45	0.00	0.00	2.98	30.95
1990	4.47	1.97	0.00	7.08	4.00	1.81	0.21	6.44	0.00	0.00	0.00	0.20	26.18
1991	0.77	0.38	1.33	1.10	5.26	18.35	0.47	0.25	0.63	0.00	0.02	0.00	28.56
1992	0.82	2.03	4.43	2.83	12.86	5.89	1.84	0.00	0.80	0.00	0.00	0.00	31.50
1993	3.64	0.43	12.25	15.23	9.43 a	3.29	2.58	2.31	0.97	0.00	0.00	0.00	50.13
1994	0.97	3.42	6.62	4.39	7.58	0.68	2.43	0.98	0.00	0.00	0.00	0.00	27.07
1995	0.98	9.54	5.36	29.90	0.36	20.01	3.31	1.54	0.38	0.00	0.00	0.00	71.38
1996	0.03	0.40	12.63	9.97	14.14	3.23	3.34	3.12	0.00	0.00	0.00	0.02	46.88
1997	2.29	4.68	17.21	14.43	0.43	2.46	1.01	0.80	0.59	0.00	1.05	0.40	45.35
1998	1.26	11.59	4.09	15.38	25.41	4.61	3.21	7.52	0.03	0.00	0.00	0.09 a	73.19
1999	1.37	8.88	1.62	0.00 z	12.88	6.62	2.31	0.04	0.06	0.00	0.00	0.07	-
2000	1.19	6.98	0.99	9.61	14.58	3.15	3.09 a	1.83	0.26	0.00	0.00 z	0.13	-
2001	3.44	1.25	1.12	7.97	9.77	2.94	1.40	0.00	0.04	0.00	0.00	0.21	28.14
2002	3.03	10.44 a	12.83	3.08	1.80	3.46 b	0.51	1.58	0.00	0.00	0.00	0.00	36.73
2003	0.00	5.16	25.21	6.50	2.80 a	4.84	6.55	1.19	0.00	0.04	0.00	0.01 a	52.30
2004	0.00 z	4.06 a	18.81	5.75	12.82 a	1.79	1.55	0.08	0.00	0.00	0.00	0.05	-
2005	4.3	2.14	13.38	6.88	5.42	8.49	2.72	9.54	1.39	0	0	0	54.26
2006	1.43	3.36	19.96	7.66	5.93	13.47 a	8.92	0.55	0	0	0	0	61.28
2007	0.53	3.8 a	7.79	0.42	12.5	0.25	3.6	0.49	0	0.17 a	0	0.09	29.64
2008	5.06	0.36	8.83	17.04	3.98	0.53	0.23	0	0	0 z	0 z	0 z	-
						1931-2006 Period of Record Statistics							
MEAN	2.25	5.24	8.21	8.92	7.42	5.42	2.66	1.08	0.30	0.04	0.13	0.37	42.03
MAX	10.83	21.20	25.21	29.90	25.41	20.34	12.93	9.54	2.17	1.71	3.17	4.52	83.26
MIN	0.00	0.00	0.00	0.41	0.10	0.07	0.04	0.00	0.00	0.00	0.00	0.00	16.92
NO YRS	76	77	77	77	77	78	78	78	78	77	76	77	73

1962-1981 Average = 42.27

Source:
Western Regional Climate Center website, http://www.wrcc.dri.edu/summary/climsmnca.html



Base map per USGS 7.5 Minute Quad maps for Geyserville and Guerneville.

N

0 1,000' 2,000' 4,000'

Legend

- Watershed Boundary
- 14" Line of Equal Mean Annual Runoff
- Point of Diversion

Map to Accompany
Water Availability Analysis
for
Water Right Application
by
A. Rafanelli Winery & Vineyards
for
Appropriation of Water
from Unnamed Streams

Sonoma County, California

Wagner & Bonsignore
Consulting Civil Engineers, A Corporation

Q:\Drawings\Rafanelli Mike\Water Rights\WAA Map.dwg

September 2008